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10/750,002	12/30/2003	Hans-Christoph Rohland	6570P009	9951
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SAP/BLAKELY 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER ALI, FARHAD	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/750,002

Applicant(s)

ROHLAND ET AL.

Examiner

Farhad Ali

Art Unit

2146

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6-8, 10-11, 13-15, 17-20, 22-23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Zargham et al. (US 6,954,757 B2).

Zargham teaches:

#### **Claim 6**

A computer readable storage media containing executable computer program instructions which when executed cause a digital processing system to perform a method comprising:

starting a central services node to provide at least one of a locking service and a messaging service ([Zargham] Column 7 Lines 43-46, "An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions");

starting a plurality of application server instances ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition ( J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures"); and

organizing the application server instances into a cluster having star topology with the central services node at a center of the star topology ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters" and see Column 6 Lines 53-61, "Loosely coupled applications").

#### **Claim 7**

The computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

sharing a database among the plurality of application server instances ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework").

**Claim 8**

The computer readable storage media of 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein starting a plurality of application server instances comprises:

starting, for each application server instance of the plurality, a dispatcher node and a plurality of server nodes ([Zargham] See Figure 9, ZLE framework).

**Claim 10**

The computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

registering each application server with the messaging server ([Zargham] Column 13 Lines 66-68, "The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

**Claim 11**

The computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

conducting inter instance communication through the messaging service ([Zargham] Column 21 Lines 53-55, "Messaging functions in the ZLE framework may involve a simple messaging scenario of an EAI-type request-response situation").

**Claim 13**

The computer readable storage media of claim 10 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

notifying all registered instances from the message server when an additional instance joins the cluster ([Zargham] Column 13 Lines 66-68, "The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

**Claim 14**

A system comprising:

means for organizing a plurality of application servers instances into a cluster having a star topology with a central services node at a center of the star topology ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters" and see Column 6 Lines 53-61, "Loosely coupled applications");

means for sharing a storage resource across the cluster; and means for performing centralized inter instances communication ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational

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data store (ODS) with a relational database management system (RDBMS) in the ZLE framework”);.

**Claim 15**

The system of claim 14 further comprising:

means for centralized locking of a resource within the cluster ([Zargham] Column 7 Lines 43-46, “An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions”).

**Claim 17**

The system of claim 14 wherein the means for performing comprises:

means for registering instances; and

means for recording services provided in the cluster ([Zargham] Column 13 Lines 66-68, “The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations”).

**Claim 18**

A method comprising:

starting a central services node to provide at least one of a locking service and a messaging service ([Zargham] Column 7 Lines 43-46, “An event may unlock or prompt

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the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions”).

starting a plurality of application server instances ([Zargham] Column 16 Lines 12-16, “The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition ( J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures”); and

organizing the application server instances into a cluster having star topology with the central services node at a center of the star topology ([Zargham] Column 3 Lines 21-26, “the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters” and see Column 6 Lines 53-61, “Loosely coupled applications”).

#### **Claim 19**

The method of claim 18 further comprising:

sharing a database among the plurality of application server instances ([Zargham] Column 8 Lines 34-37, “Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework”).

#### **Claim 20**

The method of claim 18 wherein starting a plurality of application server instances comprises:



starting, for each instance of the plurality, a dispatcher node and a plurality of server nodes ([Zargham] See Figure 9, ZLE framework).

**Claim 22**

The method of claim 18 wherein organizing comprises:

registering each application server with the messaging server ([Zargham] Column 13 Lines 66-68, "The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations")..

**Claim 23**

The method of claim 18 further comprising:

conducting inter instance communication through the messaging service ([Zargham] Column 21 Lines 53-55, "Messaging functions in the ZLE framework may involve a simple messaging scenario of an EAI-type request-response situation").

**Claim 25**

The method of claim 22 wherein organizing further comprises:

notifying all registered instances from the message server when an additional instance joins the cluster ([Zargham] Column 13 Lines 66-68, "The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 9, 12, 16, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zargham et al. (US 6,954,757 B2) in view of Cullen et al. (US 2002/0078132 A1).

**Claim 1**

Zargham et al. teaches a system comprising:

a database ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework"); and

a plurality of instances of an application server implementing a Java application model ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition ( J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures") coupled in a star topology with the message server at a center of the star topology, the plurality of instances sharing the database ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and

communicating therewith via adapters” and see Column 6 Lines 53-61, “Loosely coupled applications”).

Zarhgham et al. does not disclose a message server having no persistent state.

Cullen et al. discloses in paragraph [0005] “In general, in one aspect, the disclosure describes a method of handling messages received at a messaging system server. The method includes storing, in non-persistent storage, messages received from at least one client, removing delivered messages from the non-persistent storage, and saving messages stored in the non-persistent storage to persistent storage after a delay interval”.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify Zarhgham's Enterprise system to include Cullen's message server which teaches storing messages in a non persistent state. The inclusion of Cullen's message server would allow the Enterprise to run more efficiently with a reduced system downtime if the message server were to fail. Replacing Zarhgham's message server with Cullen's message server would provide for a more reliable enterprise.

### **Claim 2**

Zarhgham et al. teaches the system of claim 1 wherein each instance comprises:

a dispatcher node; and a plurality of server nodes ([Zarhgham] See Figure 9, ZLE framework).

**Claim 3**

Zargham et al. teaches the system of claim 2 wherein each server node comprises:

a java 2 enterprise edition ( J2EE) engine ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition ( J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures").

**Claim 4**

Zargham et al. teaches the system of claim 1 further comprising:

a central lock server to provide cluster wide locks to the plurality of instances ([Zargham] Column 7 Lines 43-46, "An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions").

**Claim 5**

Zargham et al. teaches the system of claim 1 wherein the message server comprises:

a first data structure to store a list of connected clients; and a second data structure and a list of services provided in the system ([Zargham] Column 1 Lines 43-46, "the ZLE can integrate data related to the real time operations of the enterprise into a data storage cache, also known as operational data store (ODS)").

**Claim 9**

Zarhgham et al. does not disclose the computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

starting a message server having no persistent state.

Cullen et al. discloses in paragraph [0005] "In general, in one aspect, the disclosure describes a method of handling messages received at a messaging system server. The method includes storing, in non-persistent storage, messages received from at least one client, removing delivered messages from the non-persistent storage, and saving messages stored in the non-persistent storage to persistent storage after a delay interval".

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify Zargham's Enterprise system to include Cullen's message server which teaches storing messages in a non persistent state. The inclusion of Cullen's message server would allow the Enterprise to run more efficiently with a reduced system downtime if the message server were to fail. Replacing Zargham's message server with Cullen's message server would provide for a more reliable enterprise.

**Claim 12**

Zargham et al. teaches the computer readable storage media of claim 9 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

restarting the message server without state recovery responsive to a system failure ([Zargham] Column 18 Lines 46-51, "This also means the ability to monitor transactions (such as the above-mentioned business transactions) and restart them in the event of failure, manage transaction boundaries, manage queues, and so on" and a memory server having no persistent state typically cannot have a state recovery).

**Claim 16**

Zargham et al. does not disclose the system of claim 14 wherein the means for performing comprises:

a message server having no persistent state.

Cullen et al. discloses in paragraph [0005] "In general, in one aspect, the disclosure describes a method of handling messages received at a messaging system server. The method includes storing, in non-persistent storage, messages received from at least one client, removing delivered messages from the non-persistent storage, and saving messages stored in the non-persistent storage to persistent storage after a delay interval".

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify Zargham's Enterprise system to include Cullen's message server

which teaches storing messages in a non persistent state. The inclusion of Cullen's message server would allow the Enterprise to run more efficiently with a reduced system downtime if the message server were to fail. Replacing Zargham's message server with Cullen's message server would provide for a more reliable enterprise.

### **Claim 21**

Zarhgham et al. does not disclose the method of claim 18 wherein starting a central service node comprises:

starting a message server having no persistent state.

Cullen et al. discloses in paragraph [0005] "In general, in one aspect, the disclosure describes a method of handling messages received at a messaging system server. The method includes storing, in non-persistent storage, messages received from at least one client, removing delivered messages from the non-persistent storage, and saving messages stored in the non-persistent storage to persistent storage after a delay interval".

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify Zargham's Enterprise system to include Cullen's message server which teaches storing messages in a non persistent state. The inclusion of Cullen's message server would allow the Enterprise to run more efficiently with a reduced system downtime if the message server were to fail. Replacing Zargham's message server with Cullen's message server would provide for a more reliable enterprise.

**Claim 24**

Zarhgham et al. teaches the method of claim 21 further comprising:

restarting the message server without state recovery responsive to a system failure ([Zargham] Column 18 Lines 46-51, "This also means the ability to monitor transactions (such as the above-mentioned business transactions) and restart them in the event of failure, manage transaction boundaries, manage queues, and so on" and a memory server having no persistent state typically cannot have a state recovery).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhad Ali whose telephone number is (571) 270-1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



F.A.

JEFFREY PWU  
SUPERVISORY PATENT EXAMINER